

**IN THE UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF TEXAS  
DALLAS DIVISION**

COMMSCOPE TECHNOLOGIES LLC,	§	
	§	
Plaintiff,	§	
Counterclaim Defendant,	§	
	§	
v.	§	
	§	
DALI WIRELESS, INC.,	§	Civil Action No. 3:16-cv-0477-M
	§	
Defendant,	§	
Counterclaim Plaintiff,	§	
	§	
v.	§	
	§	
COMMSCOPE CONNECTIVITY LLC,	§	
	§	
Counterclaim Defendant.	§	

**SEALED ORDER<sup>1</sup>**

Before the Court are the Motion for Judgment as a Matter of Law (ECF No. 450), the Motion for Permanent Injunction (ECF No. 439), the Motion for Enhanced Damages and Attorneys’ Fees (ECF No. 448), the Motion for Award of Prejudgment and Post-judgment Interest (ECF No. 445), and the Motion for Entry of Judgment (ECF No. 452), all filed by Plaintiff CommScope Technologies LLC; and the Motion for Judgment as a Matter of Law (ECF No. 446) and the Motion for Prejudgment and Post-judgment Interest (ECF No. 441), both filed by Defendant Dali Wireless, Inc. (“Dali”).

---

<sup>1</sup> Because this Order cites to and quotes Motions, Appendices, and Orders that were filed under seal, this Order will be initially filed under seal. If a party believes that any portion of the Order should be permanently sealed, the party should file, by May 1, 2020, a motion to seal those portions of the Order, identifying the portions to be sealed and explaining why those portions should be sealed. Opposing parties may file a response to any motion to seal by May 1, 2020. If no motions to seal are filed by May 1, 2020, the Court will unseal the Order.

For the reasons stated below, CommScope's Motion for Judgment as a Matter of Law (ECF No. 450) and Dali's Motion for Judgment as a Matter of Law (ECF No. 446) are DENIED; CommScope's Motion for Permanent Injunction (ECF No. 439) is GRANTED IN PART; CommScope's Motion for Enhanced Damages and Attorneys' Fees (ECF No. 448) is GRANTED IN PART; CommScope's Motion for Award of Prejudgment and Post-judgment Interest (ECF No. 445) is GRANTED; Dali's Motion for Prejudgment and Post-judgment Interest (ECF No. 441) is GRANTED IN PART; CommScope's Motion for Entry of Judgment (ECF No. 452) is DENIED AS MOOT. The Court will enter judgment granting relief to both parties on their affirmative claims.

## **I. Background**

CommScope Technologies LLC alleges infringement of U.S. Patent Nos. 9,332,402; 8,577,286; 8,326,218; 7,639,982 (collectively the "'402 Patent Family") and U.S. Patent No. 7,848,747 (the "'747 Patent") by Dali. Dali asserts counterclaims against CommScope Technologies LLC and CommScope Connectivity LLC (collectively and singly "CommScope"), alleging infringement of U.S. Patent Nos. 9,031,521 (the "'521 Patent") and 9,531,473 (the "'473 Patent") by CommScope.

Specifically, CommScope accuses Dali's tSeries and Matrix products of infringing twenty claims of the '402 Patent Family and Claims 7, 8, and 10 of the '747 Patent. Dali accuses CommScope's FlexWave Prism product of infringing Claims 1–3, 16, and 20 of the '521 Patent and CommScope's ION-E product of infringing Claims 6–21 of the '473 Patent.

CommScope moved for summary judgment of invalidity and non-infringement of Dali's '473 Patent, invalidity and non-infringement of Dali's '521 Patent, and infringement by Dali of the '747 Patent. Dali moved for summary judgment of non-infringement of

CommScope's '747 Patent and invalidity and non-infringement of CommScope's '402 Patent Family.

The Court granted summary judgment that Dali's accused products infringe Claims 7, 8, and 10 of CommScope's '747 Patent, and that CommScope does not infringe Claims 3, 16, and 20 of Dali's '521 Patent. The Court denied summary judgment on all other grounds.

The case was tried to a jury. The jury found the following:

- Dali's t-Series and Matrix products infringe Claims 1 and 12 of the '218 Patent, Claims 23 and 27 of the '286 Patent, Claims 1 and 14 of the '402 Patent, and Claim 1 of the '982 Patent; and the infringement was willful.
- The royalty that would have been agreed to at a hypothetical negotiation in December 2012 to compensate CommScope for Dali's use of the '982, '218, '286, and '402 Patents is \$1,574,342.07.
- The asserted claims of the '982, '218, '286, and '402 Patents are not invalid because of (1) obviousness, (2) lack of enablement, or (3) lack of written description.
- Dali's infringement of Claims 7, 8, and 10 of the '747 Patent was willful.
- The royalty that would have been agreed to at a hypothetical negotiation in December 2012 to compensate CommScope for Dali's use of the '747 Patent is \$402,470.37.
- The '747 Patent is not invalid because of obviousness.
- CommScope's FlexWave Prism infringes Claim 1 of the '521 Patent.
- The royalty that would have been agreed to at a hypothetical negotiation on May 12, 2015, to compensate Dali for CommScope's use of its '521 Patent is \$6,612,321.50.
- The '521 Patent is not invalid because of anticipation.
- CommScope's ION-E product infringes Claims 6, 9, 11, 14, 15, and 21 of the '473 Patent.
- The royalty that would have been agreed to at a hypothetical negotiation on December 27, 2016, to compensate Dali for CommScope's use of the '473 Patent is \$2,388,002.77.

- The '473 Patent is not invalid because of (1) anticipation, (2) obviousness, (3) lack of enablement, or (4) lack of written description.

After trial, the parties filed their post-trial motions. On December 13, 2019, the Court held a hearing on those motions. As an initial matter, because the Court will enter a Final Judgment in accordance with this Order, CommScope's Motion for Entry of Judgment (ECF No. 452) is DENIED AS MOOT. The Court will address the remaining post-trial motions below.

## **II. CommScope's Motion for Judgment as a Matter of Law and New Trial**

CommScope moves for judgment as a matter of law under Federal Rule of Civil Procedure 50, and, in the alternative, for a new trial under Rule 59. In a patent infringement case, motions for judgment as a matter of law and for a new trial are governed by the law of the regional circuit. *z4 Techs., Inc. v. Microsoft Corp.*, 507 F.3d 1340, 1346–47 (Fed. Cir. 2007).

A motion for judgment as a matter of law should be granted only if a party has been fully heard on an issue during a jury trial, and the court finds that a reasonable jury did not have a legally sufficient evidentiary basis to find for the nonmoving party on that issue. Fed. R. Civ. P. 50(a). The court must be especially deferential to the jury's verdict, and should only grant a motion for judgment as a matter of law if the facts and inferences point so strongly and overwhelmingly in the movant's favor that reasonable jurors could not reach a contrary conclusion. *Janvey v. Dillon Gage, Inc. of Dall.*, 856 F.3d 377, 385 (5th Cir. 2017). In other words, a jury verdict must be upheld, and judgment as a matter of law may not be granted, unless "there is no legally sufficient evidentiary basis for a reasonable jury to find as the jury did." *Hiltgen v. Sumrall*, 47 F.3d 695, 700 (5th Cir. 1995) (internal quotation and citation omitted). The jury's verdict must be supported by "substantial evidence." *Am. Home Assurance Co. v. United Space Alliance*, 378 F.3d 482, 487 (5th Cir. 2004).

The court must review all of the evidence in the record, drawing all reasonable inferences in favor of the nonmovant. *Reeves v. Sanderson Plumbing Prods., Inc.*, 530 U.S. 133, 150 (2000). The court may not make credibility determinations or weigh the evidence, as those are jury functions. *Id.* In reviewing the record as a whole, the court should “give credence to the evidence favoring the nonmovant as well as that evidence supporting the moving party that is uncontradicted and unimpeached, at least to the extent that that evidence comes from disinterested witnesses.” *Id.* at 151 (internal quotation and citation omitted).

CommScope argues that the Court should grant judgment as a matter of law that (1) Claim 1 of the '521 Patent is invalid, (2) Claim 1 of the '521 Patent is not infringed, (3) the asserted claims of the '473 Patent are invalid, and (4) the asserted claims of the '473 Patent are not infringed. After reviewing the briefing and the record, the Court DENIES CommScope's Motion for Judgment as a Matter of Law.

#### **A. Invalidity of the '521 Patent**

Establishing invalidity by anticipation under 35 U.S.C. § 102 is an especially heavy burden for a patent challenger. *Koito Mfg. Co. v. Turn-Key-Tech, LLC*, 381 F.3d 1142, 1151 (Fed. Cir. 2004). To show that a patent claim is anticipated under § 102, the movant must show, by clear and convincing evidence, that each limitation of the claim is described or embodied, either expressly or inherently, in a single prior reference. *Gechter v. Davidson*, 116 F.3d 1454, 1457 (Fed. Cir. 1997).

CommScope argues that the '521 Patent is invalid, because the “Bauder” (U.S. Patent App. No. 2003/0035494 A1), “Wright,” (U.S. Patent No. 6,587,514) and “Khan” (U.S. Patent No. 5,959,499) prior art references anticipate Claim 1.

**1. Anticipation by Bauder**

CommScope argues that no reasonable jury could find that Bauder does not disclose Claim 1's element of "switching a controller off to disconnect signal representative of the output of the power amplifier." At trial, CommScope's expert on invalidity, Dr. John Wood, testified that the "switching" element of Claim 1 was taught by Bauder. (*See, e.g.*, ECF No. 442 at A347–48, 98:18–104:10) (explaining that the controller in Bauder is in a non-operating state during the training phase and that it would be physically "impossible" for there to be an argument otherwise).

Dali's expert, Dr. James Kenney, testified to the differences between Bauder and Claim 1 of the '521 Patent:

Q. . . . And could you sort of summarize the nature of your disagreement with Dr. Wood?

A. Sure. He spent a little time on this. And the main feature [in Bauder] is on the left-hand side. There is no switch. There is no means to disconnect that signal of the power amplifier in the feedback path, nor is there anything that, in my opinion, was equivalent to that.

(*Id.* at A369–70, 53:21–54:4; *see also id.* at A369, 54:17–24 (Dr. Kenney stated that the '521 Patent includes a means to disconnect the feedback path, but Bauder does not); *id.* at A371 at 64:1–22 (Dr. Kenney testified that "Bauder does not disconnect the signal representative of the power amplifier"); *id.* at A372, 66:11–25 (Dr. Kenney testified that he disagrees it is impossible for the signal to be connected when the circuit is in training mode). After reviewing the evidence presented at trial and the parties' arguments, the Court finds that a reasonable juror could have determined that CommScope did not show by clear and convincing evidence that Claim 1 of the '521 Patent was anticipated by Bauder.

## **2. Anticipation by Wright**

CommScope contends that Wright anticipates Claim 1 of the '521 Patent under Dali's theory of infringement that CommScope's FlexWave Prism meets Claim 1's element of "switching a controller off to disconnect signal representative of the output of the power amplifier." At trial, Dr. Wood testified that Wright discloses a "multi-way selector switch" called "RF MUX" for selecting between feedback from different power amplifiers. (*See* ECF No. 442 at A350, 109:8–112:4). CommScope argues that the majority of Dr. Kenney's testimony is that the FlexWave Prism infringes because it has the same feature.

Dali responds that Dr. Kenney testified that Wright did not disclose a controller that could be switched into a non-operating state, (*see id.* at A370, 58:12–18) ("And Wright does disclose a multiplexor which is like a multi-pole switch. The fact is that the switch also has to have a controller, and you have to put that controller into a non-operating state. That's not— That was not disclosed in Wright."), and that, in contrast, the FlexWave Prism has a controller and a switch, (*see* A282 at 61:13–17) (explaining how the FlexWave Prism meets the "switching" element of Claim 1).

After reviewing the evidence presented at trial and the parties' arguments, the Court finds that a reasonable juror could have determined that CommScope did not show by clear and convincing evidence that Claim 1 of the '521 Patent was anticipated by Wright.

## **3. Anticipation by Khan**

CommScope contends that no reasonable jury could conclude that Khan does not disclose (1) the "establishing" step of Claim 1 and (2) the "generating" and "retrieving" steps of Claim 1.

The "establishing" step of Claim 1 of the '521 Patent states: "establishing pre-computed distortion contributions based on pre-compensation training feedback signals representative of

output of the power amplifier.” Dr. Kenney testified that Khan does not disclose the establishing step, because the feedback signals in Khan are filtered and therefore not representative of the output of the power amplifier. (ECF No. 442 at A368, 50:14–51:2). CommScope argues that Dr. Kenney’s testimony is flawed because “representative” was not a construed claim, the plain language of the element does not exclude filtering, and the preferred embodiment of the ’521 Patent shows the power amplifier signal passing through two filter boxes.

The Court disagrees and finds that, in light of Dr. Kenney’s testimony, a reasonable juror could have concluded that CommScope did not prove by clear and convincing evidence that Khan did not disclose the “establishing” step of Claim 1.

The operating phase of Claim 1 of the ’521 Patent includes: “generating a digital lookup table key based on the original value” and “retrieving from the lookup table, using the digital lookup table key, a corresponding pre-computed distortion contribution for the original value.” CommScope asserts that Khan expressly teaches these steps in Figure 8 and in the specification. With respect to the “generating” limitation, Dr. Kenney testified:

Q. Okay. And did you also analyze this element and disagree with Dr. Khan about this one? I’m sorry; Dr. Wood.

A. Yes. I – We disagree – I dispute that the element of “generating a digital look-up table based on the original value” is happening in Khan, and the reason is that this box called “Ration Determiner” was never really defined in – in Khan, and it’s not a term of art that someone would know just by looking at the name of it.

(ECF No. 442 at A368, 51:19–52:4). With respect to the “retrieving” limitation, Dr. Kenney testified:

Q. Did you also analyze this limitation?

A. Yeah. It was the same issue, that the look-up encoder was not properly defined in Khan, and therefore, someone reading the patent wouldn’t really know how to retrieve the value from the look-up table.

(*Id.* at A368, 52:5–9).

The Court finds, based on all of the evidence presented, that a reasonable juror could have concluded that CommScope did not prove by clear and convincing evidence that Khan anticipated the “generating” and “retrieving” steps of Claim 1 of the ’521 Patent.

## **B. Infringement of Claim 1 of the ’521 Patent**

To prove infringement, the plaintiff must show the presence of every element or its equivalent in the accused device. *Lemelson v. United States*, 752 F.2d 1538, 1551 (Fed. Cir. 1985). Determining infringement is a two-step process: “First, the claim must be properly construed to determine its scope and meaning. Second, the claim as properly construed must be compared to the accused device or process.” *Absolute Software, Inc. v. Stealth Signal, Inc.*, 659 F.3d 1121, 1129 (Fed. Cir. 2011) (citing *Carroll Touch, Inc. v. Electro Mech. Sys., Inc.*, 15 F.3d 1573, 1576 (Fed. Cir. 1993)). “A determination of infringement is a question of fact that is reviewed for substantial evidence when tried to a jury.” *ACCO Brands, Inc. v. ABA Locks Mfr. Co.*, 501 F.3d 1307, 1311 (Fed. Cir. 2007).

CommScope argues that no reasonable jury could conclude that the FlexWave Prism performs two elements of Claim 1 of the ’521 Patent: (1) “performing a training phase . . . and performing an operating phase,” and (2) “switching a controller off to disconnect signal representative of the output of the power amplifier.”

First, CommScope contends that Dr. Wood testified that, unlike the ’521 Patent, the FlexWave Prism does not perform two separate phases. (ECF No. 442 at A345, 89:22–90:7 (“So the TI system operates – works in a totally different way from what is described in the – in the Dali patent and expressed in the claims. There is no training phase. It’s not a two-phase system. It – you start it up. It starts operating, it starts adapting, and it continues to adapt throughout –

throughout its usage.”); *see also id.* at A342–43, 78:23–82:18 (“Unlike the claim language that you saw, this does not have two phases. There is no training phase. It just operates all the time.)).

Dali responds that Dr. Wood’s conclusion that the FlexWave Prism has no separate training and operating phases is flawed because he analyzed a system with two power amplifiers and concluded that the two phases happen simultaneously because the controller switches back and forth between the two power amplifiers to share feedback. Dali contends that this Court’s construction of power amplifier—that the power amplifier in Claim 1 “always refers to the same power amplifier that is introduced in the preamble” and that Claim 1 requires a system to have at least one power amplifier that covers all of the method steps—does not support Dr. Wood’s conclusion. (ECF No. 94 at 8).

Dr. Kenney testified that, in light of this Court’s construction of power amplifier, the feedback signal in the FlexWave Prism is connected during the training phase and disconnected during the operating phase. (*See, e.g.*, ECF No. 442 at A282, 61:23–62:4) (“Well, it was construed as always – if you think about the operational mode and the training mode, we’re only talking about one power amplifier at a time. And the Court construed that the power amplifier is the same power amplifier that you were determining the information on during the training phase. So this shows two power amplifiers. Other products have more, maybe less. But in this case we’re really only concerned about a single power amplifier.”).

The Court finds that there was substantial evidence to support the jury’s conclusion that CommScope’s FlexWave Prism “perform[ed] a training phase . . . and perform[ed] an operating phase.”

Second, CommScope asserts that the FlexWave Prism does not perform the switching element of Claim 1. The Court construed the switching element of Claim 1 to mean “switching a controller to a nonoperating state to disconnect signal representative of the output of the power amplifier.” (ECF No. 94 at 24–25). At trial, Dr. Kenney testified:

[A.] . . . So the first step in this operating phase is to switch a controller off. And the Court [has] define[d] that – that means placing the controller in a non-operating state so that you disconnect the signal from the output of the PA. So in a sense you turn the feedback off. And the TI documents show a switch. This is the simplest schematic I could find. And I have circled it in red there. And various other schematics show that switch as well. So it meets this limitation.

Q. And what did you identify as the switch?

A. Well, the actual switch circuit is a series of transistors that switch the actual RF signal on and off. And it is also associated with a logic that controls it that is on the FPGA, all those things being on the ALPACA board.

(ECF No. 442 at A282, 61:4–12). Dr. Kenney further testified:

This switch is a control selector switch. It’s a two-way selector or a toggle switch, if you prefer. And its – its job is really to keep – keep a signal going into the DPD chip. And it will take – it will listen first to amplifier A and then amplifier B, amplifier A, amplifier B. And it’s doing this in turn all the time.

(*Id.* at A343, 83:16–21).

CommScope contends that Dr. Kenney’s testimony only supports the position that the FlexWave Prism has a controller and that the controller switches off a signal, not that the controller itself becomes nonoperational. CommScope also asserts that Dr. Wood established that, in the FlexWave Prism, the controller is always operating. (*See* ECF No. 442 at A343–44, 82:19–87:24).

The Court disagrees with CommScope and finds that Dr. Kenney’s testimony and the other evidence presented constitutes substantial evidence to support the jury’s conclusion that the FlexWave Prism meets Claim 1’s switching element.

### **C. Invalidity of the '473 Patent**

CommScope argues that “Sabat” anticipates Claims 6, 9, 11, and 14 of the '473 Patent; “Sabat” in light of “Bauman” renders Claims 15 and 21 obvious; and Claims 6–21 are invalid for lack of written description and enablement.<sup>2</sup>

#### **1. Anticipation by “Sabat”**

At trial, Dali urged that element 6(e) of the '473 Patent, which is common to Claims 9, 11, and 14, is missing from Sabat. Element 6(e) states,

wherein the host unit is configurable to transmit a digital representation of a first subset of the plurality of downlink signals to the first remote unit and a digital representation of a second subset of the plurality of downlink signals to the second remote unit, the second subset being different than the first subset.

CommScope's expert, Dr. Anthony Acampora, testified how Sabat anticipates element 6(e):

A. So this limitation requires that the switch can send one subset to one unit and a different subset to a different unit. A subset could include just one. And I've shown an example. Channel 1 from the second one, the blue line is being sent to the second remote on the top line, the one in blue. And signal 2 from sector K, that's being sent to the first remote on the top line. So the highlighted limitation is being met.

(ECF No. 442 at A336, 53:14–24).

In contrast, Dali's expert, Dr. Harry Bims, testified to the differences between Sabat and element 6(e):

A. Okay. So in the '473 Patent, the signals coming in from the base station are selected individually. So it's like receiving a package, opening it up, and taking out all of its contents one by one.

---

<sup>2</sup> After trial, on August 12, 2019, the PTAB issued a final decision, finding that Claims 6–21 of the '473 Patent are invalid. (ECF No. 442 at A661). Specifically, the PTAB found that those claims are unpatentable as anticipated by and obvious over Wu (U.S. Patent Application Pub. No. 2010/0128676 A1) and Wu/Sabat. In this case, neither party argued that Wu impacted the validity of the '473 Patent. Further, at the December 13, 2019 hearing on the parties' post-trial motions, the parties agreed that the PTAB's decision was informative, not dispositive.

So then what happens in the host unit is that those items are divided into subsets that are delivered to different houses. So the original packaging is thrown away because there's a new subset of the items being created before they're delivered to individual houses. So that's kind of how the host unit distributes signals to remote units.

Q. How about in Sabat?

A. So with the Sabat, there's a different concept going on here. So the package delivery arrives at the host unit, and then the host unit looks inside the box. And then what will happen is the switch will determine where to route that entire package. So none of the contents in the package are ever taken out and repackaged into different subsets. So the idea here is: What comes in goes out, right, without any changes. That's not what the '473 Patent is talking about. It's talking about creating new subsets of the contents and distributing them individually.

(*Id.* at A376 at 81:2–84:25).

Based on this testimony and the record as a whole, the Court finds that the jury had substantial evidence to support its decision that Sabat does not anticipate Claims 6, 9, 11, and 14 of the '473 Patent.

## **2. Obviousness in Light of Sabat and Bauman**

A patent is invalid “if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains.” 35 U.S.C. § 103. The determination of whether a subject matter is obvious is based on an analysis of the following factors: (1) the “level of ordinary skill in the pertinent art,” (2) the “scope and content of the prior art,” (3) the “differences between the prior art and the claims at issue,” and (4) “secondary considerations” of non-obviousness such as “commercial

success, long-felt but unsolved needs, failure of others, etc.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007) (quoting *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966)).

A party seeking to invalidate a patent based on obviousness must prove “by clear and convincing evidence that a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success in doing so.” *Procter & Gamble Co. v. Teva Pharm. USA, Inc.*, 566 F.3d 989, 994 (Fed. Cir. 2009) (quoting *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1361 (Fed. Cir. 2007)). “The presence or absence of a motivation to combine references in an obviousness determination is a pure question of fact.” *PAR Pharm., Inc. v. TWI Pharm., Inc.*, 773 F.3d 1186, 1196 (Fed. Cir. 2014) (quoting *Alza Corp. v. Mylan Labs., Inc.*, 464 F.3d 1286, 1289 (Fed. Cir. 2006)).

CommScope argues that no reasonable jury could have concluded that CommScope did not prove that a person of ordinary skill would have had the motivation to combine Sabat and Bauman and that Claims 15 and 21 of the ’473 Patent are obvious in light of those two references. CommScope’s expert, Dr. Acampora, testified that “it would be obvious to make the combination of Baumann [sic] with Sabat to get to Claims 15 and 21 . . . because both of these are directed to RF distribution systems . . . .” (ECF No. 442 at A335–36, 50:17–23, 54:9–18). Dali’s expert, Dr. Bims, disagreed that the mere fact that both references are directed to similar fields of technology would give a person of ordinary skill the motivation to combine them. (*See, e.g.*, A377 at 87:16–89:11). The jury had the testimony of both experts and heard each side’s arguments. A reasonable jury could have concluded from the testimony and the record as a whole that CommScope did not meet its burden to prove that a person of ordinary skill would not have been motivated to combine Sabat and Bauman.

### 3. Lack of Written Description and Enablement for Claims 6–21 of the '473 Patent

To be valid under 35 U.S.C. § 112, a claim must satisfy two separate and independent requirements: (1) the patent must sufficiently describe the claimed invention, and (2) the patent must enable the invention's production and use. *Alcon Research Ltd. v. Barr Labs., Inc.*, 745 F.3d 1180, 1188 (Fed. Cir. 2014). The written description inquiry focuses on whether the patentee provided a description that identifies the claimed invention in sufficient detail, such that a person of ordinary skill in the art at the time of filing would understand what the inventor had claimed. *Allergan, Inc. v. Sandoz Inc.*, 796 F.3d 1293, 1308 (Fed. Cir. 2015).

Enablement is an objective inquiry into the four corners of the specification, from the perspective of a person of ordinary skill in the art. *Id.* To establish that a claim is not enabled under § 112, the party claiming invalidity must show, by clear and convincing evidence, that the patent specification does not enable a person of ordinary skill in the art to make and use the claimed invention. *Vasudevan Software, Inc. v. MicroStrategy, Inc.*, 782 F.3d 671, 684 (Fed. Cir. 2015). Enablement is a legal question based on underlying factual determinations. *Transocean Offshore Deepwater Drilling, Inc. v. Maersk Drilling USA, Inc.*, 699 F.3d 1340, 1355 (Fed. Cir. 2012). A claim is enabled even if a “considerable” amount of experimentation is necessary to create the invention, so long as the experimentation is “merely routine,” or if the specification provides a reasonable amount of guidance as to the direction in which experimentation should proceed. *In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988) (internal citation and quotation omitted). However, if “undue experimentation” is required, the claim is invalid under § 112 as not enabled. *Id.*

As it did at summary judgment, CommScope argues that the '473 Patent specification does not disclose or enable (1) a host unit that creates or sends different subsets of carriers to

different remote units, or (2) remote units that are able to selectively forward to another daisy-chained remote only a subset of the signals it received from the host unit.

In denying summary judgment on both of these grounds, the Court stated:

The specification of the '473 Patent discloses that a host unit receives a composite signal comprising input from several cellular carriers (e.g., Verizon, T-Mobile, etc., generically described in the specification as "Carriers 1–8") which can then be transported to a plurality of remotes. '473 Patent at 6:39–47. Within the host, software settings determine which remote receives which signals from Carriers 1–8. *Id.* at 6:26–44. Even in a daisy-chain configuration, the specification discloses that individual remotes are capable of selectively forwarding specific carrier signals, and that this functionality is controlled by the host. *Id.* at 6:63–65. The specification further teaches that the host can be configured to transport "any specific" signal available at the host to "any specific" remote. *Id.* at 7:30–36.

A person of ordinary skill in the art could configure the system disclosed by the '473 Patent with a host unit that embeds data in its transmissions to the remote units, such that the first remote unit in the daisy chain receives a particular subset of the downlink signals (Carriers 1–4) and transmits this subset, such that the second remote unit in the daisy-chain receives a different subset from the first remote unit (Carriers 1, 2, and 4) and transmits that subset.

(ECF No. 360 at 20–21). The Court ultimately found that (1) the plain language of the specification discloses a configurable host, (2) a person of ordinary skill in the art could, without undue experimentation, configure a host unit that creates remote-specific subsets, and (3) a person of ordinary skill in the art could, without undue experimentation, configure the system disclosed by Claims 6–21 of the '473 Patent in a daisy-chained topology. (*Id.* at 21).

After reviewing the trial record, the Court finds its summary judgment findings correct and determines that there is substantial evidence to support the jury's conclusion that Claims 6–21 of the '473 Patent are not invalid under 35 U.S.C. § 112.

**D. Infringement of Asserted Claims of the '473 Patent**

CommScope argues that there is not substantial evidence to support the jury's verdict that its ION-E product infringed the '473 Patent. Specifically, CommScope asserts first, that Claims 9, 14, and 15 are not infringed because the ION-E product is not "capable of packetizing," and second, that all of the claims of the '473 Patent are not infringed because Dali made two statements during IPR of the '473 Patent that disclaim systems like the ION-E product.

Claims 9, 14, and 15 of the '473 Patent contain the following limitation: a host unit "capable of packetizing each digital representation of an uplink signal." The Court construed "packetizing" to mean "forming data into bundled units, which must include destination information such as within a packet header." (ECF No. 372 at 2). CommScope argues that Dr. Bims' testimony only described in the ION-E product the structure or mechanism for communication from the host to the remotes, and that he did not testify that the host unit is capable of packetizing uplink signals.

After reviewing Dr. Bims' testimony and the record as a whole, the Court finds that there was substantial evidence before the jury to support its decision that the ION-E product was "capable of packetizing" and therefore infringed Claims 9, 14, and 15 of the '473 Patent. (*See, e.g.*, ECF No. 442 at A301, 66:25–67:20; *id.* at A305, 84:14–18; *id.* at A375, 77:18–78:23).

The Court rejects CommScope's argument that Dali disclaimed the following during IPR: (1) systems in which remote units are not capable of selectively forwarding specific radio resources to a downstream remote unit in a daisy-chain and (2) systems where the transmission path remain fixed until a switch is changed. The Court found in its Supplemental Claim Construction Order that Dali's statements during IPR were explanatory or clarifying statements consistent with the plain language of the claims, and that Dali "has not disclaimed systems where

the transmission paths remain fixed until a switch is changed, systems in which the host unit does not have the capability of extracting and routing individual radio resources, or systems in which remote units are not capable of selectively forwarding specific radio resources to a downstream remote unit in a daisy-chain.” (ECF No. 372 at 3). Nothing that occurred at trial changes this conclusion.

#### **E. Request for New Trial**

As an alternative to its request for judgment as a matter of law, CommScope requests a new trial. Under Rule 59(a), a new trial can be granted to any party on any or all issues “for any reason for which a new trial has heretofore been granted in an action at law in federal court.” Fed. R. Civ. P. 59(a). “A new trial may be granted, for example, if the district court finds the verdict is against the weight of the evidence, the damages awarded are excessive, the trial was unfair, or prejudicial error was committed in its course.” *Smith v. Transworld Drilling Co.*, 773 F.2d 610, 612–13 (5th Cir. 1985). The Court must view the evidence “in a light most favorable to the jury’s verdict, and [ ] the verdict must be affirmed unless the evidence points so strongly and overwhelmingly in favor of one party that the court believes that reasonable persons could not arrive at a contrary conclusion.” *Dawson v. Wal-Mart Stores, Inc.*, 978 F.2d 205, 208 (5th Cir. 1992).

CommScope argues that the jury’s verdict that the FlexWave Prism infringes Claim 1 of the ’521 Patent is irreconcilable with the jury’s verdict that Wright does not anticipate Claim 1. CommScope further asserts that, as to the ’473 Patent, the weight of the evidence establishes that the ION-E’s host units do not have the capability to use destination addresses to packetize uplink signals and that the remote units cannot selectively forward subsets of signals to daisy-chained

remotes. The Court disagrees that these arguments merit a new trial and denies CommScope's request.

In sum, CommScope's Motion for Judgment as a Matter of Law is DENIED.

### **III. Dali's Motion for Judgment as a Matter of Law**

In its Motion for Judgment as a Matter of Law, Dali argues that (1) its products do not infringe the '402 Patent Family, (2) the asserted claims of the '402 Patent Family and the '747 Patent are invalid, (3) CommScope is not entitled to the damages award, and (4) Dali did not willfully infringe the '402 Patent Family or the '747 Patent. For the reasons discussed below, Dali's Motion for Judgment as a Matter of Law is DENIED.

#### **A. Infringement of the '402 Patent Family**

Dali argues that its products do not infringe the asserted claims of the '402 Patent Family. First, Dali asserts that its t-Series and Matrix products do not infringe Claims 1 and 12 of the '218 Patent, Claim 23 of the '286 Patent, and Claim 1 of the '402 Patent. Dali asserts that those claims each recite an analog wireless signal (which must include all of the radio frequency spectrum and wireless transmissions received by each remote) and a corresponding digital signal (which must be "indicative of" the analog wireless signal). Dali contends that its products filter out the radio frequency spectrum and only digitize the wireless transmission, so that the digital signal is not indicative of the original analog signal.

CommScope's expert, Dr. Acampora, testified that the digital signals generated and transported by Dali's products are "indicative of" the original analog RF signal. Dr. Acampora stated:

The digital samples, as I explained earlier, are indicative of the original RF signal, what was still RF, because I testified the shape of the spectrum, the shape of the band of interest, its amplitude and its phase characteristics within those two frequencies extremes, is all that is relevant as far as that RF signal is concerned. So if I translate to an intermediate frequency but don't disturb the amplitude and phase

of the past band or if I translate to baseband, I don't disturb the amplitude and phase of the past band, at either of those points, if I sample, those samples are indicative of the original RF spectrum received in that remote unit.

(ECF No. 442 at A111, 243:23–244:9). In light of this testimony, along with the rest of the trial record, the Court finds that there is substantial evidence to support the jury's conclusion that the digital signals generated by Dali's products indicate the analog radio frequency signal, and therefore infringe Claims 1 and 12 of the '218 Patent, Claim 23 of the '286 Patent, and Claim 1 of the '402 Patent.

Second, Dali argues that its products do not infringe Claim 1 of the '982 Patent, because CommScope failed to show that Dali's products "shared circuitry that performs bi-directional simultaneous digital radio frequency distribution of digitized radio frequency signals between the digital host unit and the at least two digital remote units." (ECF No. 447 at 7). Dr. Acampora testified, among other things, that (1) the host unit of the '982 Patent includes one shared circuit path along the downstream signal path and one shared circuit path along the upstream signal path, (*see* ECF No. 442 at A92, 166:6–17) ("The downlink and the uplink are operating at the same time. So we have got shared circuitry that performs bi-directional uplink and downlink and simultaneous at the same time."), and that (2) Dali's products include the shared circuitry recited in the '982 Patent, (*see, e.g., id.* at A98 at 190:9–16). The Court finds that there was substantial evidence to support the jury's conclusion that Dali's products infringed Claim 1 of the '982 Patent.

#### **B. Invalidity of Asserted Claims of the '402 Patent Family and '747 Patent**

Dali argues that the asserted claims of the '402 Patent Family and the '747 Patent are invalid for lack of written description, lack of enablement, and obviousness. After reviewing the patents and the relevant testimony and evidence, the Court finds that the patents are not invalid

under 35 U.S.C. § 112 for lack of written description and lack of enablement. Similarly, after reviewing the asserted claims in the '402 Patent Family and the '747 Patent and the relevant prior art (including, "Bexten," "Russell," "Smith," "Bellers," "Farhan," and "Grace") and testimony<sup>3</sup>, the Court finds that there was substantial evidence to support the jury's determination that Dali did not show by clear and convincing evidence that those patents are invalid for obviousness.

### **C. Damages Award**

Dali argues that the jury's award of \$1,976,812.44 in favor of CommScope is excessive and not supported by substantial evidence. Dali contends the award is based on the inadmissible testimony of CommScope's expert witness, Dr. Keith Ugone, and CommScope's employee, Trevor Smith. Dali requests that the Court reduce CommScope's damages to \$0. In the alternative, Dali asks the Court to adjust the damages award to an 8% royalty (a maximum reasonable royalty of \$205,266), consistent with Dali's expert opinion, or to set a new trial on damages.

At trial, Dr. Ugone testified that Dali owed CommScope \$13,662,263 for infringing the '402 Patent Family and the '747 Patent. (ECF No. 407 at 142:22–143:3). Dr. Ugone testified that, as part of the hypothetical negotiation, Dali would have agreed to a \$15 million upfront payment and a 15% royalty rate to license the '402 Patent Family and a \$5 million

---

<sup>3</sup> The Court reviewed evidence related to "secondary considerations of nonobviousness," including considerations of "commercial success, long-felt but unsolved needs, failures of others, and copying." *Para-Ordnance Mfg., Inc. v. SGS Importers Intern., Inc.*, 73 F.3d 1085, 1087–88 (Fed. Cir. 1995); (see, e.g., ECF No. 442 at A72, 85:16–20; *id.* at A82, 128:11–14; *id.* at A82–83, 128:18–129:2; *id.* at A141, 93:12–94:15; *id.* at A256, 109:18–110:6, 110:19–111:1; *id.* at A256–57, 112:21–113:7). The Court finds that review of such testimony is proper, because the evidence presented by CommScope was sufficient to show a nexus between the merits of the claimed invention and evidence of secondary considerations. *Ruiz v. A.B. Chance Co.*, 234 F.3d 654, 668 (Fed. Cir. 2000) ("A nexus between the merits of the claimed invention and evidence of secondary considerations is required in order for the evidence to be given substantial weight in an obviousness decision.").

upfront payment and a 15% royalty rate to license the '747 Patent. (ECF No. 408 at 54:10–55:4; 60:14–22). Dali argues that Dr. Ugone's opinions should have been excluded under Rule 702 and *Daubert*. Dali asserts that Dr. Ugone's testimony is inadmissible because it “did nothing more than repeat statements made by a single CommScope employee: Mr. Smith,” and that Mr. Smith failed to lay a foundation for Dr. Ugone's testimony. (ECF No. 447 at 16).

At trial, Mr. Smith testified that CommScope had previously offered to license the “critical” patents in its digital DAS patent portfolio for \$25 million/25% royalty, and that the \$15 million/15% calculation came from an a la carte plan to license the '402 Patent Family and the '747 Patent. (ECF No. 408 at 27:5–28:15; ECF No. 407 at 119:3–120:4). Dali argues that this testimony is undermined by Mr. Smith's acknowledgment at trial that he did not know which patents offered in the digital DAS patent portfolio were critical, that no company had ever licensed the patents in this case for \$25 million/25% royalty, and that he had never done an a la carte allocation for the patents in this case. Dali contends that Mr. Smith's “improvised, contradictory, and purely hypothetical testimony—which should have been excluded under Motion in Limine No. 4—is the *sole basis* for Dr. Ugone's [damages] opinion.” (ECF No. 447 at 20) (emphasis in original).

The Court determines that it did not err in admitting Dr. Ugone or Mr. Smith's testimony. Dr. Ugone's opinion was based on information from knowledgeable CommScope and Dali employees, including Albert Lee, Andrew Leung, and Trevor Smith (*see, e.g.*, ECF No. 442 at A156, 153:12–155:4, 155–159; *id.* at A161–64; *id.* at A173–75), as well as Dr. Acampora's technical expertise regarding the asserted patents. Dr. Ugone sufficiently explained the connection between CommScope's negotiations regarding the digital DAS patent portfolio and his conclusion of what Dali would pay in a hypothetical negotiation with CommScope. Dali was

free to cross-examine Dr. Ugone on these issues at trial, and it did so rigorously. The jury obviously discounted substantially Dr. Ugone's conclusion of damages. For example, the jury heard evidence that CommScope's Kathrein license included an upfront fee of \$1.5 million and a 12% royalty rate. (*See* ECF No. 442 at A153, 143:9–21; *see also id.* at A173–75, 52:5–59:2; *id.* at A170–71, 40:19–41:12; ECF No. 444 at SA245–46, 1.22).

The Court finds that the jury's award of \$1,976,812.44 to CommScope is not excessive or against the great weight of the evidence. The Court determines that substantial evidence supports the jury's award to CommScope.

#### **D. Willful Infringement**

Dali challenges the jury's finding that it willfully infringed the '218, '286, '402, and '747 Patents and requests judgment as a matter of law of no willfulness. Willfulness requires that CommScope prove by a preponderance of the evidence that Dali knew, or it was so obvious that Dali should have known, that its actions constituted infringement of a valid and enforceable patent. *See Halo Electronics, Inc. v. Pulse Electronics, Inc.*, 136 S. Ct. 1923, 1934, (2016). The Court concludes that there is substantial evidence to support the jury's finding of willfulness. For instance, Dali's CEO Dr. Lee testified that he knew about the '218 and '286 Patents before this lawsuit (*see, e.g.*, ECF No. 407 at 15:25–16:12). There is also evidence that Dali knew or should have known that its actions infringed the '747 Patent, including that, in 2010, Dali had knowledge of the parent patent to the '747 Patent, which shares the same specification, inventor, and assignee as the '747 Patent. (ECF No. 442 at A840; *id.* at A119). Further, the testimony reflects that Dali knew about the '982 Patent in 2010 and determined it did not pose a problem, despite the fact that it was warned by customers and others that Dali's products may have infringed the '982 Patent. (*Id.* at A123, 23:20–25; *id.* at A125, 30:6–9). Thus, the Court finds

that the jury's finding of willfulness is supported by substantial evidence.

Dali also claims that even if the Court does not set aside the jury's finding of willfulness, enhanced damages are not warranted. Because CommScope filed a separate motion requesting enhanced damages, the Court will address Dali's arguments related to enhanced damages in its analysis of that motion in the next section—Section IV—of this Order.

For the reasons stated above, Dali's Motion for Judgment as a Matter of Law is DENIED.

#### **IV. CommScope's Motion for Enhanced Damages Under 35 U.S.C. § 284 and Attorneys' Fees Under 35 U.S.C. § 285**

CommScope asks the Court to award it enhanced damages under 35 U.S.C. § 284 and attorneys' fees and expenses reasonably incurred under 35 U.S.C. § 285.

##### **A. Enhanced Damages**

A court may, in its discretion, enhance damages up to three times when there is a finding of willful infringement or bad-faith on the part of the infringing party. 35 U.S.C. § 284; *see SRI Int'l Inc. v. Advanced Tech. Labs., Inc.*, 127 F.3d 1462, 1468–69 (Fed. Cir. 1997). “Bad faith” in this context refers to an infringer's lack of due care with regard to avoiding infringement and is more properly called “bad faith infringement.” *Jurgens v. CBK, Ltd.*, 80 F.3d 1566, 1571 (Fed. Cir. 1996). Although “bad faith” acts, such as litigation misconduct, are not alone sufficient to support an enhancement of damages, assuming the requisite culpability is present, such acts can be considered in determining whether to award enhanced damages and how much to award. *See id.* at 1570–71. A finding of willful infringement provides sufficient culpability to justify the enhancement of damages under § 284. *See id.* at 1571, 1573.

Enhanced damages are a punitive measure taken by a court to penalize a willful infringer for its increased culpability. *See id.* at 1570. However, a court may refrain from awarding enhanced damages based on the weight of the evidence supporting willfulness and the closeness

of the issues at trial. *See Brooktree Corp. v. Advanced Micro Devices, Inc.*, 977 F.2d 1555, 1582 (Fed. Cir. 1992); *Laitram Corp. v. NEC Corp.*, 115 F.3d 947, 955 (Fed. Cir. 1997). “The paramount determination in deciding to grant enhancement and the amount thereof is the egregiousness of the defendant’s conduct based on all the facts and circumstances.” *Read Corp. v. Portec, Inc.*, 970 F.2d 816, 826 (Fed. Cir. 1992), *abrogated on other grounds by Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 975 (Fed. Cir. 1995) (en banc).

Courts normally consider the following factors in deciding whether to enhance damages and the amount of enhancement: (1) whether the infringer deliberately copied the ideas or design of another; (2) whether the infringer, when it knew of the other’s patent protection, investigated the scope of the patent and formed a good-faith belief that it was invalid or that it was not infringed; (3) the infringer’s behavior as a party to the litigation; (4) the defendant’s size and financial condition; (5) closeness of the case; (6) duration of the defendant’s misconduct; (7) remedial action by the defendant; (8) the defendant’s motivation for harm; and (9) whether the defendant attempted to conceal its misconduct. *Id.* at 827.

The Court finds that the *Read* factors weigh in favor of awarding CommScope enhanced damages. Most importantly, the evidence shows that Dali failed to investigate the asserted patents, even after it knew of the ’982 Patent and was repeatedly warned by customers and competitors that Dali’s products may infringe CommScope’s patent portfolio on digital DAS technology. (*See, e.g.*, ECF No. 442 at A122–23, 20:20–21:20; *id.* at A125, 32:9–12). For instance, Dali did not hire outside counsel to consider whether Dali’s products infringed the digital DAS patents. The Court finds that, under the *Read* factors, it is appropriate to increase CommScope’s damages by two times the amount found by the jury. Thus, the Court awards CommScope \$3,953,624.88 in enhanced damages.

**B. Attorneys' Fees**

In exceptional cases, a district court may award reasonable attorneys' fees to the prevailing party. 35 U.S.C. § 285. Reasonable attorneys' fees include those expenses incurred in the preparation for and performances of legal services related to the case and nontaxable costs. *Maxwell v. Angel-Etts of Cal., Inc.*, 53 F. App'x 561, 569 (Fed. Cir. 2002).

A party "prevails" when it receives "relief on the merits" that "materially alters the legal relationship between the parties by modifying" the defendant's behavior in a way that "directly benefits" the plaintiff. *SSL Servs., LLC v. Citrix Sys., Inc.*, 769 F.3d 1073, 1086 (Fed. Cir. 2014) (quoting *Farrar v. Hobby*, 506 U.S. 103, 111–12 (1992)); *Shum v. Intel Corp.*, 629 F.3d 1360, 1367 (Fed. Cir. 2010). Because both parties in this case received relief on the merits, the Court finds there is no prevailing party in this case and thus declines to award attorneys' fees under § 285 to either party. See *Eastman Kodak Co. v. Agfa-Gevaert N.V.*, No. 02-CV-6564T, 2008 WL 5115252, at \*2 (W.D.N.Y. 2008) ("With respect to Agfa's request for attorneys' fees, because neither party is a prevailing party, neither party is entitled to attorneys' fees."); *Senior Technologies, Inc. v. R.F. Technologies, Inc.*, 190 F.R.D. 642, 643 (D. Neb. 2000) (declining to award costs in patent case "where neither side entirely prevailed").

**V. CommScope's Motion for Permanent Injunction**

CommScope asks the Court to enter a permanent injunction enjoining Dali and others in active concert with it from (i) making, using, selling, importing and/or offering for sale in the United States Dali's infringing t-Series distributed antenna system (and colorable imitations thereof); and (ii) making, using, selling, importing and/or offering for sale in the United States Dali's infringing Matrix distributed antenna system (and colorable imitations thereof), for the remaining term of CommScope's asserted patents. For the reasons stated below, the Court grants CommScope's request for a permanent injunction. However, the injunction is stayed pending

any appeal of this case by Dali. The injunction shall become effective after any appeal of this case by Dali is resolved. If Dali does not file a timely appeal, the injunction shall become effective as soon as the deadline for Dali to file a timely appeal has lapsed.

Section 283 of Title 35 states that courts “may grant injunctions in accordance with the principles of equity to prevent the violation of any right secured by patent, on such terms as the court deems reasonable.” According to well-established principles of equity, a plaintiff seeking a permanent injunction must satisfy a four-factor test before a court may grant such relief. A plaintiff must demonstrate: (1) that it has suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction. *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 391 (2006).

**A. Irreparable Injury and Inadequate Remedies at Law**

“To prove irreparable injury, a patentee must show (1) that absent an injunction, it will suffer irreparable harm, and (2) that a sufficiently strong causal nexus” connects the alleged irreparable harm “to the [ ] infringement.” *Presidio Components, Inc. v. Am. Tech. Ceramics Corp.*, 875 F.3d 1369, 1383 (Fed. Cir. 2017) (internal citation and quotation omitted). “To determine whether the patentee will suffer irreparable harm absent an injunction, the court may consider factors such as the nature of competition between the patentee and the infringer, the willingness of a patentee to license, and any lost sales the patentee has proven.” *Id.* (internal citation omitted). The court may also consider the harm to the patentee’s reputation in the market. *See Douglas Dynamics, LLC v. Buyers Prod. Co.*, 717 F.3d 1336, 1344 (Fed. Cir. 2013) (“Irreparable injury encompasses different types of losses that are often difficult to quantify,

including lost sales and erosion in reputation and brand distinction.”); *Presidio Components, Inc. v. Am. Tech. Ceramics Corp.*, 702 F.3d 1351, 1363 (Fed. Cir. 2012) (“Direct competition in the same market is certainly one factor suggesting strongly the potential for irreparable harm without enforcement of the right to exclude.”).

In addition, “unwillingness to license [a patent] favor[s] finding irreparable injury.” *Id.*

Further,

[w]hile the fact that a patentee has previously chosen to license the patent may indicate that a reasonable royalty does compensate for an infringement, that is but one factor for the district court to consider. The fact of the grant of previous licenses, the identity of the past licensees, the experience in the market since the licenses were granted, and the identity of the new infringer all may affect the district court’s discretionary decision concerning whether a reasonable royalty from an infringer constitutes damages adequate to compensate for the infringement.

*Acumed LLC v. Stryker Corp.*, 551 F.3d 1323, 1328 (Fed. Cir. 2008).

“Difficulty in estimating monetary damages is evidence that remedies at law are inadequate.” *i4i Ltd. P’ship v. Microsoft Corp.*, 598 F.3d 831, 862 (Fed. Cir. 2010). “[L]oss of market share, brand recognition, and customer goodwill as the result of the defendant’s infringing acts,” are all losses which the Federal Circuit has recognized are “difficult to quantify.” *Id.* While irreparable harm and the inadequacy of remedies at law are two separate factors to be considered, they do intersect. *See TEK Glob., S.R.L. v. Sealant Sys. Int’l, Inc.*, 920 F.3d 777, 792 (Fed. Cir. 2019) (“The inherent difficulty of quantifying ‘loss of market share, brand recognition, and customer goodwill’ and of estimating monetary damages indicates that ‘remedies at law are inadequate.’”) (internal quotation and citation omitted).

The Court finds that CommScope will suffer irreparable harm if Dali is not enjoined from selling its t-Series and Matrix products. The evidence at trial showed that Dali and CommScope are direct competitors in the market for digital DAS products, and are the only two suppliers of

digital DAS products that have received any form of approval for sales to major wireless service providers. (*See, e.g.*, ECF No. 442 at A72, 86:25–87:3) (“Q. So are you aware of any other company who has sold a multipoint digital RF transport product to the major service providers? A. Other than Dali, no.”). The Court is not convinced by Dali’s argument that CommScope does not need an injunction, because Dali’s customers are limited primarily to those in the public safety market. Trial testimony shows that Dali has obtained at least some level of approval from AT&T and won a contract with DFW Airport over CommScope’s bid. (*Id.* at A267, 3:22–4:22 (“ Basically, now we have the license to sell into basically [ ] all the AT&T network, which is – which means a lot of revenues for – for [Dali]); *see also id.* at A363, 29:16–19) (“Q. And you know that Dali actually had a project or that DFW Airport chose Dali over anybody else, including CommScope, for their new public safety DAS system, didn’t they? A. I’ll agree with that, yes.”)).

The Court finds that the existence of CommScope’s license to Kathrein does not weigh against a finding of irreparable harm. Kathrein was a specific license that involved a cross-license of three patent portfolios and included specific provisions unique to CommScope’s relationship with Kathrein (i.e., a two-year waiting period during which Kathrein was barred from entering the U.S. market with digital DAS products using CommScope’s patents). Although CommScope was willing to license the asserted patents, and others, to Kathrein under particular circumstances, it has not been generally willing to license its DAS digital patent portfolio. (*See, e.g.*, ECF No. 442, A141 at 91:15–16 (“A. Well, we really prefer not to license for most of our products.”)). In any event, a patentee’s willingness to license its patent is only one factor in the Court’s determination as to whether irreparable harm exists. The Court finds that, taking all relevant circumstances under consideration, CommScope will suffer irreparable

harm if the Court does not grant its requested injunction.

CommScope's loss of market share, if Dali is permitted to continue to sell its infringing products, is difficult to quantify. Further, it would be difficult for the Court to determine a royalty amount based on the jury's verdict, which does not specify a royalty amount, and the royalty used cannot be calculated from the jury's award. Given these circumstances, the Court finds that neither a license nor different remedies other than the requested injunction are adequate to compensate CommScope for its irreparable injury. Thus, CommScope has satisfied the first two elements of the test for injunctive relief.

**B. Balance of Relative Hardships Between the Parties**

The balance of hardships "assesses the relative effect of granting or denying an injunction on the parties." The district court considers several factors in its analysis, "includ[ing] the parties' sizes, products, and revenue sources." *i4i Ltd.*, 598 F.3d at 862.

CommScope argues that the fact that Dali has been targeting CommScope's major customers and that no other digital multipoint DAS system (besides CommScope and Dali's systems) has been approved by any of the major wireless service providers establishes that the balance of hardship favors an injunction. CommScope states that even though the infringing systems represent a significant portion of Dali's product lines, the requested injunction would not bar Dali from pursuing foreign markets and would only be in effect for the remaining terms of CommScope's asserted patents.

Dali responds that CommScope's hardships are monetary only, but that an injunction will harm Dali's reputation and may cause Dali to go out of business.

The Court finds that the balance of hardships weighs in favor of granting CommScope's request for an injunction. However, the Court acknowledges the significant impact the

injunction will have on Dali. Thus, as stated above, the Court will stay the injunction pending any appeal of this case by Dali. The Court rejects CommScope's request to enter a limited injunction during the appeal.

**C. Public Interest**

“[T]he touchstone of the public interest factor is whether an injunction, both in scope and effect, strikes a workable balance between protecting the patentee's rights and protecting the public from the injunction's adverse effects.” *i4i Ltd.*, 598 F.3d at 863.

The Court finds that the public interest supports the requested injunction because it is narrowly tailored to appropriately fit the circumstances, and there is no critical public interest that would be injured by granting the injunction.

**VI. The Parties' Motions for Prejudgment and Post-judgment Interest**

Both parties move for prejudgment interest. Section 284 of Title 35 states that “[u]pon finding for the claimant, the court shall award the claimant damages adequate to compensate for the infringement but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the court.” District courts have “great discretion when determining the applicable interest rate for an award of prejudgment interest.” *Summit 6 LLC v. Research in Motion Corp.*, 3:11-CV-367-O, 2013 WL 12124321, at \*15 (N.D. Tex. June 26, 2013).

CommScope asserts that both parties' prejudgment award should be simple interest based on the U.S. Treasury rate. Dali argues that it should be awarded prejudgment interest, compounded annually, from the date of first infringement through the date of judgment, based on the current Texas statutory rate of 5.25% for prejudgment interest, or, alternatively, on the annualized prime rate applicable to the damages for that period. Dali contends that the U.S.

Treasury rate does not put the patent owner “in as good a position as he would have been in had the infringer entered into a reasonable royalty agreement,” *GM Corp. v. Devex Corp.*, 461 U.S. 648, 655–56 (1983), because corporations and individuals cannot actually borrow at rates as low as the Treasury bill rate.

The Court finds that the U.S. Treasury rate on a simple basis is an appropriate prejudgment interest rate for both parties’ damages. *See Melchior v. Hilite Int’l Inc.*, No. 3:11-cv-0394, ECF No. 291 at 29 (N.D. Tex. Jul. 15, 2015) (Lynn, J.) (awarding simple prejudgment interest at the U.S. Treasury rate), *rev’d on other grounds*, 665 F. App’x 894 (Fed. Cir. 2016)).

Neither party objects to the Court awarding post-judgment interest pursuant to 28 U.S.C. § 1961(a). Thus, the Court will award post-judgment interest consistent with § 1961(a).


## **VII. Conclusion**

IT IS ORDERED that CommScope’s Motion for Judgment as a Matter of Law (ECF No. 450) and Dali’s Motion for Judgment as a Matter of Law (ECF No. 446) are DENIED. CommScope’s Motion for Permanent Injunction (ECF No. 439) is GRANTED IN PART. CommScope’s Motion for Enhanced Damages and Attorneys’ Fees (ECF No. 448) is GRANTED IN PART. CommScope’s Motion for Award of Prejudgment and Post-judgment Interest (ECF No. 445) is GRANTED, and Dali’s Motion for Prejudgment and Post-judgment Interest (ECF No. 441) is GRANTED IN PART. CommScope’s Motion for Entry of Judgment (ECF No. 452) is DENIED AS MOOT.

IT IS FURTHER ORDERED that the parties shall confer and file a joint proposed judgment to the Court within fourteen days of the date of this Order that reflects the foregoing prejudgment interest findings. If the parties cannot agree on a joint proposed judgment, each party should file its own proposed judgment.

**SO ORDERED.**

April 21, 2020.

  
BARBARA M. G. LYNN  
CHIEF JUDGE